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## WHAT IS CLAIMED IS:

- A method for treating ICU-associated hypocalcemia in a mammal to restore or maintain ionized serum calcium in said mammal which comprises administering to said mammal a therapeutically effective amount of a vitamin D compound.
  - 2. The method of claim 1 wherein the vitamin D compound is selected from compound having Formula I.
- 10 3. The method of claim 1 wherein the vitamin D compound is administered in an amount of from about 0.1 micrograms to about 2 milligrams per day depending upon the vitamin D compound administered.
- 4. The method of claim 1 wherein the vitamin D compound is administered daily to said mammal for about 1-4 weeks.
  - 5. The method of claim 1 wherein the vitamin D compound is combined with a non-toxic pharmaceutically acceptable carrier prior to administration.
- 20 6. The method of claim 1 wherein the vitamin D compound is vitamin  $D_3$  or a vitamin  $D_3$  derivative.
  - 7. The method of claim 6 wherein the vitamin D compound is 1,25-dihydroxy vitamin  $D_3$ .
  - 8. The method of claim 1 wherein the vitamin D compound is vitamin  $D_2$  or a vitamin  $D_2$  derivative.
- 9. The method of claim 8 wherein the vitamin  $D_2$  compound is 1, 25-dihydroxy-19-nor ergocalciferol.